

Amendments to the Specification:

Please replace the first full paragraph at page 14 with the following amended paragraph:

Further, in accordance with the seventh aspect of the present invention, a proton conducting membrane as mentioned above is provided, wherein the number of the groups X , which represents an -O- bond taking part in the crosslinking or an OH group of the organic-inorganic composite structure (α) represented by the aforesaid chemical formula (1) is represented by the following numerical formula (II):

$$\sum_{i=1}^P m_i \{6 - (n_1^i + n_2^i)\} = a$$

$$a: 2.9 < a < 3.5 \quad \dots \text{ (II)}$$

Please replace the paragraph bridging page 27 and 28 with the following amended paragraph:

Further, since the electricity output of a fuel cell falls when the fuel leaks toward the oxygen electrode (cathode), it is desired that the electrolyte membrane is impermeable to the fuel. In the case where a support and an electrolyte are used as in the present invention, both the support and the electrolyte are required to be capable of blocking the fuel, but since the organic-inorganic composite structure (α) of the present invention has a dense structure developed by inorganic crosslinking, the permeability of the organic-inorganic composite

structure (α) to a gaseous fuel such as hydrogen gas can be kept extremely low. Further, even in the case of direct fuel type fuel cells using a liquid fuel such as methanol, dimethyl ether and hydrocarbon, the organic-inorganic composite structure (α) of the present invention undergoes extremely little degeneration and swelling of support by fuel or permeation of fuel due to the dense structure developed by inorganic crosslinking.

Please replace the fourth full paragraph at page 57 with the following amended paragraph:

Further, the thickness of the film thus formed is properly determined by the protonic conductivity, fuel permeability and mechanical strength of the resulting proton conducting membrane and thus cannot be unequivocally defined but is normally from 10 μm to 1 mm, particularly preferably from ~~30 to 300 nm~~ 30 to 300 μm as calculated in terms of dried thickness.

Please replace the description below structure (4) at page 75 with the following amended clause:

wherein M represents a silicon atom; ~~R^1 , R^2 , and R^5~~ ; and ~~n_1 and n_2~~ each represent ~~0, 1 or 2~~ R^5 represents any of Cl, OCH_3 , OC_2H_5 , OC_3H_7 , OC_4H_9 , OC_6H_5 , OH and OCOCH_3 ; R^1 represents a $\text{C}_1\text{-C}_{50}$ carbon atom-containing molecular chain; R^2 represents any of methyl, ethyl, propyl and phenyl groups;

and n1 and n2 each represent 0, 1 or 2, with the proviso that at least one of n1 and n2 is 1 or 2.

Please replace the paragraph bridging Pages 79 and 80 with the following amended paragraph:

(4) Synthesis of precursor

(Synthesis of ~~bifunctional~~ tetrafunctional precursor)

A toluene solution of 11.0 g of 1,7-octadiene (produced by Wako Pure Chemical Industries, Ltd.) and 26.9 g of diethoxymethylsilane (produced by Shin-Etsu Silicone Co., Ltd.) was mixed with 0.05 mmol of a solution of Karstedt catalyst (U.S. Pat. 3,775,452) prepared from chloroplatinic acid (produced by Wako Pure Chemical Industries, Ltd. and divinyl tetramethyl disiloxane (produced by Gelest, Inc.) and then stirred at 30°C in a nitrogen atmosphere overnight. The reaction mixture thus obtained was then purified by distillation to obtain 1,8-bis(diethoxymethylsilyl)octane. The structure was identified by NMR.

Please replace the paragraph beginning at page 80 line 12 with the following amended paragraph:

(Synthesis of ~~trifunctional~~ bifunctional precursor)

1,8-Bis(dimethylethoxysilyl)octane was obtained in the same manner as mentioned above except that dimethyl ethoxysilane was used instead of diethoxymethylsilane.